

Quality Control

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : _____									

Work Order ID 156823

Wednesday, February 08, 2017 9:10:34 AM

156823

Page 2

Item ID: 646.4001

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 2/17/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130		0.00							
130	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPP 646.4001 Location: _____								
140		0.00							
140	QC21- Final Inspection - Work Order Release								
QC	Memo	0.02							
Quality Control									

DAS
27
9-89

MAR 24 2017



MAR 24 2017



MAR 24 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

Picklist Print

Page 1

Wednesday, February 08, 2017 9:10:32 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 12.10.23 NEW ISSUE DD VERF:JLM
IPP REV:B 15.01.08 AS PER DWG REV.B DD VERF:JLM IPP
REV:C 16.01.07 AS PER DWG REV.C DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

600.0129		Purchased	No			100	f	160.0000	8	8			
600 0129									**			MAR 14 2017	DAS 28 9-89
VHB TAPE 75935A651													

Location	Loc Qty	Loc Code
CCK096	160	
m135867	160	
600.0990		
Purchased	No	
600 0990		
Magnabond 6398 Part A Size 112 ml		

Location	Loc Qty	Loc Code
PKG	14	
M135600	2	
M136586	11	
M134249	1	
600.0991		
Purchased	No	
600 0991		
Magnabond 6398 Part B Size 112 ml		

Location	Loc Qty	Loc Code
PKG	14	
m135600	2	
m136586	12	
600.0991		
Purchased	No	
600 0991		
Magnabond 6398 Part B Size 112 ml		

MAR 24 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
3-PAU 8-2 88-1								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

600.1012 Purchased No

100 Each 12.0000 1 1

600 1012

Sealant PR1425B2 (#654 sem)

**

DAS 6 MAR 14 2017 28 9-89

DAS 27 9-89

07/17

Location

Loc Qty

Loc Code

cck017

12

m136554

8

m136586

4

600.1013 Purchased No

100 Each 65.0000 5 5

600 1013

021200-3M TAPE PRIMER 94 PRIMER 24216

**

DAS 6 MAR 14 2017 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

CCK096

65

m136345

65

646.2910 Manufactured No

100 Each 2.0000 1 1

646 2910

Deflector

**

DAS 6 MAR 14 2017 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

CCK050

2

151647

2

646.3001 Manufactured No

100 Each 2.0000 1 1

646 3001

Lower Cable Cutter Assembly

**

DAS 6 MAR 14 2017 28 9-89

DAS 27 9-89

Location

Loc Qty

Loc Code

ST018

2

151685

2

155642

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : _____							

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

646.3110
646 3110

Channel

Manufactured No

100 Each 7.0000 1 1

**

Location

Loc Qty

Loc Code

cck020

7

152235

7

646.3210
646 3210

Support

Manufactured No

100 Each 6.0000 1 1

**

Location

Loc Qty

Loc Code

cck020

6

151669

6

646.3301
646 3301

Upper Cutter Assembly

Manufactured No

100 Each 1.0000 1 1

**

Location

Loc Qty

Loc Code

cck018

1

151655

1

646.3510
646 3510

Strut

Manufactured No

100 Each 9.0000 1 1

**

Location

Loc Qty

Loc Code

cck104

9

152366

9

646.3511
646 3511

Strut

Manufactured No

100 Each 1.0000 1 1

**

Location

Loc Qty

Loc Code

cck104

1

153990

1

DAS 28 9-89
DAS 6 9-89
MAR 14 2017

DAS 28 9-89
DAS 6 9-89
MAR 14 2017

DAS 28 9-89
DAS 6 9-89
MAR 14 2017

DAS 28 9-89
DAS 6 9-89
MAR 14 2017

DAS 28 9-89
DAS 6 9-89
MAR 14 2017

155269

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

646.3610
646 3610
Filler

Manufactured No

100 Each 7.0000 1 1

**

DAS
6
9-89

DAS
28
9-89
MAR 14 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

cck104

7

151687

7

646.3710
646 3710
Doubler

Manufactured No

100 Each 29.0000 1 1

**

DAS
6
9-89

DAS
28
9-89
MAR 14 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK006

29

152594

29

646.3711
646 3711
Clip

Manufactured No

100 Each 8.0000 1 1

**

DAS
6
9-89

DAS
28
9-89
MAR 14 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

cck104

8

151670

8

646.3712
646 3712
Clip

Manufactured No

100 Each 4.0000 1 1

**

DAS
6
9-89

DAS
28
9-89
MAR 14 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

cck104

4

151018

4

646.3713
646 3713
Gusset

Manufactured No

100 Each 10.0000 1 1

**

DAS
6
9-89

DAS
28
9-89
MAR 14 2017

DAS
27
9-89

Location

Loc Qty

Loc Code

cck105

10

151646

10

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

646.3714
646 3714

Gusset

DAS
27
9-89

Manufactured No

100 Each

10.0000

1 1

**

DAS
6
9-89

DAS
28
9-89

MAR 11 2017

Location

Loc Qty

Loc Code

cck105

10

151643

10

646.3715
646 3715

Strut Doubler

DAS
27
9-89

Manufactured No

100 Each

2.0000

2 2

**

DAS
6
9-89

DAS
28
9-89

MAR 11 2017

Location

Loc Qty

Loc Code

cck105

2

151668

2

646.3716
646 3716

Gauge Bracket

DAS
27
9-89

Manufactured No

100 Each

9.0000

1 1

**

DAS
6
9-89

DAS
28
9-89

MAR 11 2017

Location

Loc Qty

Loc Code

cck105

9

140845

9

646.3717
646 3717

Doubler

DAS
27
9-89

Manufactured No

100 Each

7.0000

1 1

**

DAS
6
9-89

DAS
28
9-89

MAR 11 2017

Location

Loc Qty

Loc Code

cck105

7

151423

7

646.3718
646 3718

Custom Washer

DAS
27
9-89

Manufactured No

100 Each

1.0000

2 2

**

DAS
6
9-89

DAS
28
9-89

MAR 11 2017

Location

Loc Qty

Loc Code

cck105

1

151498

1

155395

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

646.3719 Manufactured No

100 Each 3.0000 2 2

646 3719

Doubler

**

DAS
6
9-89

DAS
28
9-89

MAR 14 2017

Location

Loc Qty

Loc Code

cck105

3

151663

3

646.3810

Manufactured No

100 Each 0.0000 2 2

646 3810

Bracket

**

DAS
6
9-89

DAS
28
9-89

MAR 14 2017

Location

Loc Qty

Loc Code

CCK106

6

151651

6

646.3811

Manufactured No

100 Each 6.0000 1 1

646 3811

Radius Block

**

DAS
6
9-89

DAS
28
9-89

MAR 14 2017

Location

Loc Qty

Loc Code

CCK106

2

151644

2

646.3812

Manufactured No

100 Each 2.0000 2 2

646 3812

Gusset Bracket

**

DAS
6
9-89

DAS
28
9-89

MAR 14 2017

Location

Loc Qty

Loc Code

CCK106

6

150933

1

152765

5

646.3813

Manufactured No

100 Each 6.0000 1 1

646 3813

AS350 Strut Bracket

**

DAS
6
9-89

DAS
28
9-89

MAR 14 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : _____			

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

646.3910 Manufactured No

100 Each 17.0000 4 4

646.3910

Shim

**

DAS
6
9-89

DAS
28
9-89

MAR 14 2017

Location

Loc Qty

Loc Code

CCK108A

17

151458

17

646.3911 Manufactured No

100 Each 19.0000 1 1

646.3911

Shim

**

DAS
6
9-89

DAS
28
9-89

MAR 14 2017

Location

Loc Qty

Loc Code

CCK106

19

126059

3

126229

16

646.3912 Manufactured No

100 Each 12.0000 4 4

646.3912

Shim

**

DAS
6
9-89

DAS
28
9-89

MAR 14 2017

Location

Loc Qty

Loc Code

CCK106

12

151683

12

646.3913 Manufactured No

100 Each 58.0000 1 1

646.3913

Shim

**

DAS
6
9-89

DAS
28
9-89

MAR 14 2017

Location

Loc Qty

Loc Code

CCK106

58

126060

58

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	☐ OTHER : _____			

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By																																																									
24- 3- 3-3								Lead hand / Supervisor Approval Verification																																																									
								QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐																																																																

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

AN3-12A Purchased No

100 Each 343.0000 2 2

MAR 14 2017

AN3-12A

Bolt

DAS
27
9-89

Location Loc Qty Loc Code

over003 206

153854 206

ST349 137

m135603 137

AN3-13A Purchased No

100 Each 69.0000 1 1

AN3-13A

Bolt

DAS
27
9-89

Location Loc Qty Loc Code

GA 16

m127070 16

ST349 53

153845 52

m136406 1

AN316C4R Purchased No

100 Each 55.0000 2 2

AN316C4R

Nut, Jam

DAS
27
9-89

Location Loc Qty Loc Code

ST331 55

153850 50

m136192 5

DAS
6
9-89

DAS
28
9-89

DAS
6
9-89

DAS
28
9-89

DA
6
9-89

DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval 		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

AN3-3A Purchased No 100 Each 265.0000 4 4

AN3-3A

Bolt

**

DAS 28 9-89
DAS 6 9-89
MAR 14 2017

Location	Loc Qty	Loc Code
ST350	265	
m136199	65	
m136643	100	
m136741	100	

AN3-4A Purchased No 100 Each 374.0000 10 10

AN3-4A

Bolt

**

DAS 28 9-89
DAS 6 9-89
MAR 14 2017

Location	Loc Qty	Loc Code
ST350	374	
m135704	41	
m136579	333	

AN3-5A Purchased No 100 Each 283.0000 2 2

AN3-5A

Bolt

**

DAS 28 9-89
DAS 6 9-89
MAR 14 2017

Location	Loc Qty	Loc Code
ST350	283	
m136182	283	

AN3-6A Purchased No 100 Each 220.0000 2 2

AN3-6A

Bolt

**

DAS 28 9-89
DAS 6 9-89
MAR 14 2017

Location	Loc Qty	Loc Code
over003	188	
153844	188	
ST350	32	
M134955	32	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

Picklist Print

Page 11

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

AN44-5A Purchased No

100 Each 19.0000 2 2

AN44-5A

Eyebolt

**

DAS 6 9-89 MAR 14 2017 DAS 28 9-89

Location

Loc Qty

Loc Code

ST339

19

m135774

7

m136047

12

2

AN4C7A Purchased No

100 Each 86.0000 2 2

AN4C7A

BOLT

**

DAS 6 9-89 MAR 14 2017 DAS 28 9-89

Location

Loc Qty

Loc Code

OVER002

54

m136295

54

ST345

32

m135864

32

109147

AN665-34R Purchased No

100 Each 43.0000 2 2

AN665-34R

Clevis

**

DAS 6 9-89 MAR 14 2017 DAS 28 9-89

Location

Loc Qty

Loc Code

ST330

43

153852

43

2

CCR264SS3-02 Purchased No

100 Each 292.0000 36 36

CCR264SS3-02

Cherry Rivet

**

DAS 6 9-89 MAR 14 2017 DAS 28 9-89

Location

Loc Qty

Loc Code

ST321

292

M136047

67

M136648

225

36

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

CR3213-5-3 Purchased No

100 Each 116.0000 14 14

CR3213-5-3

Cherry Rivet

DAS
6
9-89

MAR 14 2017

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK003

100

m136537

100

ST319

16

m135865

16

MS20426AD5-7 Purchased No

100 Each 1,500.0000 2 2

MS20426AD5-7

RIVET

DAS
6
9-89

MAR 14 2017

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

CCK004

703

153848

703

ST311

797

M133922

797

MS20470AD5-5.5 Purchased No

100 Each 750.0000 8 8

MS20470AD5-5 5

Rivet

DAS
6
9-89

MAR 14 2017

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST309

750

m134063

750

MS20470AD5-6 Purchased No

100 Each 640.0000 8 8

MS20470AD5-6

RIVET

DAS
6
9-89

MAR 14 2017

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST309

640

124089

640

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By 					
				Lead hand / Supervisor Approval Verification 					
				QC / QA Coordinator Approval 					

Root Cause				FAULT CATEGORY							
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Picklist Print

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Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS20470AD5-7 Purchased No

100 Each 386.0000 3 3

MS20470AD5-7

Rivet

Location

Loc Qty

Loc Code

ST309

386

123425

386

MS21042-08 Purchased No

100 Each 0.0000 2 2

MS21042-08

USE MS21042L08

MS21042-3 Purchased No

100 Each 0.0000 2 2

MS21042-3

Nut

MS21042L3 Purchased No

100 Each 1,589.000 61 61

MS21042L3

Nut

Location

Loc Qty

Loc Code

FP001

100

m135945

100

GA

154

m134360

108

m135135

46

OVER007

500

M136665

500

ST303

835

M136192

7

M136406

328

M136554

500

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS21042L4

Purchased

No

100

Each

1,666.000

2

2

MS21042L4

Nut

**

MAR 14 2017
DAS 6 28
9-89 9-89

Location

Loc Qty

Loc Code

FP001

18

m133363

18

GA

187

m135058

187

OVER007

500

m136450

500

ST303

961

m136648

961

13688

MS21047-3

Purchased

No

100

Each

172.0000

18

18

MS21047-3

Nut Plate

**

MAR 14 2017
DAS 6 28
9-89 9-89

Location

Loc Qty

Loc Code

ST301

172

m136442

82

m136740

28

m136781

62

18

MS24693-C278

Purchased

No

100

Each

90.0000

5

5

MS24693-C278

Screw

**

MAR 14 2017
DAS 6 28
9-89 9-89

Location

Loc Qty

Loc Code

ST287

90

m136554

90

5

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
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Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS24694-S51

Purchased

No

100

Each

102.0000

5

5

MS24694-S51

Screw

**

DAS 6 28
9-89 9-89

MAR 1 4 2017

Location

Loc Qty

Loc Code

ST284

102

m135442

102

MS24694-S54

Purchased

No

100

Each

215.0000

2

2

MS24694-S54

SCREW

**

DAS 6 28
9-89 9-89

MAR 1 4 2017

Location

Loc Qty

Loc Code

ST284

215

153846

157

m135948

58

MS24694-S55

Purchased

No

100

Each

332.0000

3

3

MS24694-S55

Screw

**

DAS 6 28
9-89 9-89

MAR 1 4 2017

Location

Loc Qty

Loc Code

over006

247

153847

247

ST283

85

m136042

85

MS27039-08-13

Purchased

No

100

Each

392.0000

2

2

MS27039-08-13

Screw

**

DAS 6 28
9-89 9-89

MAR 1 4 2017

Location

Loc Qty

Loc Code

over006

325

153849

325

ST278

67

m136199

67

DQA: _____ Date: _____

**WORK ORDER NON-CONFORMANCE / UPDATE**

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
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Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Page 16

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

100

Each

285.0000

2

2

MS27039-1-10

SCREW

**

MAR 14 2017

Location

Loc Qty

Loc Code

GA

17

m129541

17

ST280

268

m135774

268

MS27039-1-12

Purchased

No

100

Each

112.0000

6

6

MS27039-1-12

Screw

**

MAR 14 2017

Location

Loc Qty

Loc Code

ST280

112

m135566

12

m136537

100

MS27039-1-16

Purchased

No

100

Each

73.0000

24

24

MS27039-1-16

Screw

**

MAR 14 2017

Location

Loc Qty

Loc Code

ST280

73

m136537

73

MS27039-1-19

Purchased

No

100

Each

229.0000

22

22

MS27039-1-19

Screw

**

MAR 14 2017

Location

Loc Qty

Loc Code

GA

80

m134134

80

ST280

149

m136648

149

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐		Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
		OTHER : _____							

Picklist Print

Page 17

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-20

Purchased

No

100

Each

117.0000

2

2

MS27039-1-20

Screw

**

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST280

117

124326

17

m136554

100

2

MS27039-1-21

Purchased

No

100

Each

191.0000

4

4

MS27039-1-21

Screw

**

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST280

191

m127904

191

4

NAS1149F0332P

Purchased

No

100

Each

1,557.000

144

144

NAS1149F0332P

Washer

**

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

GA

343

m133709

343

ST262

1214

m136442

1214

13685

NAS1149F0363P

Purchased

No

100

Each

126.0000

2

2

NAS1149F0363P

WASHER

**

DAS
6
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

ST262

126

124555

126

2

MAR 14 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
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Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabelled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER :									

Picklist Print

Wednesday, February 08, 2017 9:10:33 AM

Work Order ID: 156823

156823

Parent Item: 646.4001

646 4001

Parent Item Name: AS350 Cable Cutter System

Start Date: 2/10/2017

Required Date: 2/17/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149F0432P

Purchased

No

100

Each

1,007.000

4

4

NAS1149F0432P

WASHER

DAS
6
9-89

MAR 14 2017

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

ST262

1007

M135704

7

M136442

1000

NAS1149FN832P

Purchased

No

100

Each

1,271.000

4

4

NAS1149FN832P

Washer

DAS
6
9-89

MAR 14 2017

DAS
28
9-89

DAS
27
9-89

Location

Loc Qty

Loc Code

GA

564

M135058

232

M136182

332

ST263

707

M136182

707

136860

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____				
Misidentified ☐	Past Due ☐					



APICAL INDUSTRIES, INC.
dba DART AEROSPACE

ENGINEERING CHANGE NOTICE NO.

05304

SHEET 1 OF 1

DWG NO. 646.4000

REV: C

PREPARED BY J. BECKER

DATE: 02/04/16

EFFECT ON DWG
☐ INC. ☒ UNINC.

DWG TITLE: AS350 CABLE CUTTERS KIT

APPROVED BY: ENGR

MFG

QC

EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD C-CREATE
R-REVISE D-DELETE

REASON: REVISED F/N 12.

ECR:
N/A

ACTION ITEM:
1. N/A

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 156823/415
1702-09

SHEET 1, BOM IS:

12	R	601.1624	8	16	LOCKNUT	MS21042L3	
F/N	TC	PART NUMBER	4006	4005	DESCRIPTION	MATERIAL	SPECIFICATION
			QTY				
DOCUMENTS EFFECTED:					CHANGE CATEGORY	DER REVIEW REQUIRED	
☐ PATTERN ☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☒ BOM					☐ MAJOR ☒ MINOR	☐ YES ☒ NO	

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WRITTEN PERMISSION OF AEROSPACE INDUSTRIES IS PROHIBITED.

NOTES:

1. AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.

2. INSTALL F/N 14 WITH F/N 52 & 53.

3. VHB ADHESIVE TAPE .025" THICK X .50" WIDE

VENDOR: MCMMASTER-CARR P/N 7593A4651

3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.

VENDOR: R.S. HUGHES P/N 002100-24216.

4. REUSE FASTENERS FROM F/N 1.

5. USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT

6. AT CUSTOMER'S OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

7. INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE

SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78

8. SCREW IN PLACE OF F/N 17 SCREW.

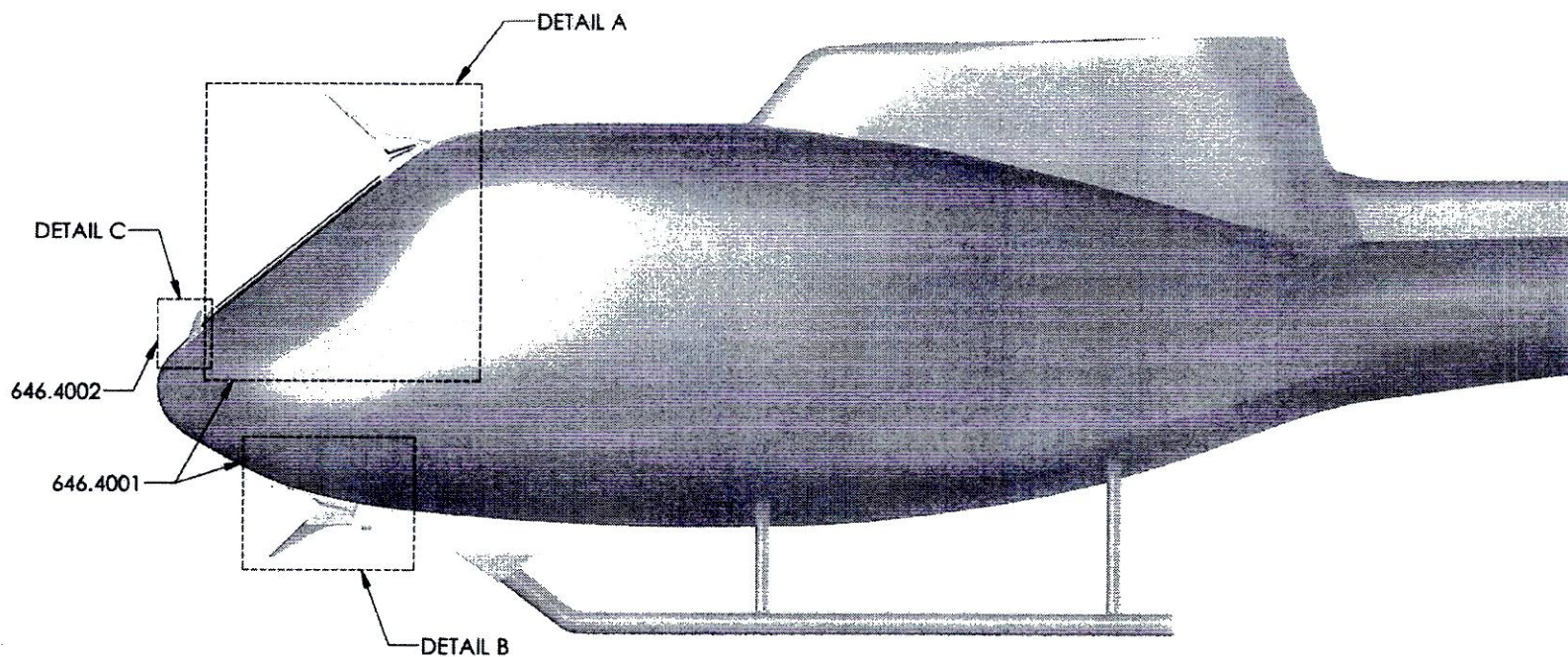
9. NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY

10. REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 &

11. F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

4006	4003	4004	4005	4006	4007	4008	4009	4010	4011	4012	4013	4014	4015	4016	4017	4018	4019	4020	4021	4022	4023	4024	4025	4026	4027	4028	4029	4030	4031	4032	4033	4034	4035	4036	4037	4038	4039	4040	4041	4042	4043	4044	4045	4046	4047	4048	4049	4050	4051	4052	4053	4054	4055	4056	4057	4058	4059	4060	4061	4062	4063	4064	4065	4066	4067	4068	4069	4070	4071	4072	4073	4074	4075	4076	4077	4078	4079	4080	4081	4082	4083	4084	4085	4086	4087	4088	4089	4090	4091	4092	4093	4094	4095	4096	4097	4098	4099	4100	4101	4102	4103	4104	4105	4106	4107	4108	4109	4110	4111	4112	4113	4114	4115	4116	4117	4118	4119	4120	4121	4122	4123	4124	4125	4126	4127	4128	4129	4130	4131	4132	4133	4134	4135	4136	4137	4138	4139	4140	4141	4142	4143	4144	4145	4146	4147	4148	4149	4150	4151	4152	4153	4154	4155	4156	4157	4158	4159	4160	4161	4162	4163	4164	4165	4166	4167	4168	4169	4170	4171	4172	4173	4174	4175	4176	4177	4178	4179	4180	4181	4182	4183	4184	4185	4186	4187	4188	4189	4190	4191	4192	4193	4194	4195	4196	4197	4198	4199	4200	4201	4202	4203	4204	4205	4206	4207	4208	4209	4210	4211	4212	4213	4214	4215	4216	4217	4218	4219	4220	4221	4222	4223	4224	4225	4226	4227	4228	4229	4230	4231	4232	4233	4234	4235	4236	4237	4238	4239	4240	4241	4242	4243	4244	4245	4246	4247	4248	4249	4250	4251	4252	4253	4254	4255	4256	4257	4258	4259	4260	4261	4262	4263	4264	4265	4266	4267	4268	4269	4270	4271	4272	4273	4274	4275	4276	4277	4278	4279	4280	4281	4282	4283	4284	4285	4286	4287	4288	4289	4290	4291	4292	4293	4294	4295	4296	4297	4298	4299	4300	4301	4302	4303	4304	4305	4306	4307	4308	4309	4310	4311	4312	4313	4314	4315	4316	4317	4318	4319	4320	4321	4322	4323	4324	4325	4326	4327	4328	4329	4330	4331	4332	4333	4334	4335	4336	4337	4338	4339	4340	4341	4342	4343	4344	4345	4346	4347	4348	4349	4350	4351	4352	4353	4354	4355	4356	4357	4358	4359	4360	4361	4362	4363	4364	4365	4366	4367	4368	4369	4370	4371	4372	4373	4374	4375	4376	4377	4378	4379	4380	4381	4382	4383	4384	4385	4386	4387	4388	4389	4390	4391	4392	4393	4394	4395	4396	4397	4398	4399	4400	4401	4402	4403	4404	4405	4406	4407	4408	4409	4410	4411	4412	4413	4414	4415	4416	4417	4418	4419	4420	4421	4422	4423	4424	4425	4426	4427	4428	4429	4430	4431	4432	4433	4434	4435	4436	4437	4438	4439	4440	4441	4442	4443	4444	4445	4446	4447	4448	4449	4450	4451	4452	4453	4454	4455	4456	4457	4458	4459	4460	4461	4462	4463	4464	4465	4466	4467	4468	4469	4470	4471	4472	4473	4474	4475	4476	4477	4478	4479	4480	4481	4482	4483	4484	4485	4486	4487	4488	4489	4490	4491	4492	4493	4494	4495	4496	4497	4498	4499	4500	4501	4502	4503	4504	4505	4506	4507	4508	4509	4510	4511	4512	4513	4514	4515	4516	4517	4518	4519	4520	4521	4522	4523	4524	4525	4526	4527	4528	4529	4530	4531	4532	4533	4534	4535	4536	4537	4538	4539	4540	4541	4542	4543	4544	4545	4546	4547	4548	4549	4550	4551	4552	4553	4554	4555	4556	4557	4558	4559	4560	4561	4562	4563	4564	4565	4566	4567	4568	4569	4570	4571	4572	4573	4574	4575	4576	4577	4578	4579	4580	4581	4582	4583	4584	4585	4586	4587	4588	4589	4590	4591	4592	4593	4594	4595	4596	4597	4598	4599	4600	4601	4602	4603	4604	4605	4606	4607	4608	4609	4610	4611	4612	4613	4614	4615	4616	4617	4618	4619	4620	4621	4622	4623	4624	4625	4626	4627	4628	4629	4630	4631	4632	4633	4634	4635	4636	4637	4638	4639	4640	4641	4642	4643	4644	4645	4646	4647	4648	4649	4650	4651	4652	4653	4654	4655	4656	4657	4658	4659	4660	4661	4662	4663	4664	4665	4666	4667	4668	4669	4670	4671	4672	4673	4674	4675	4676	4677	4678	4679	4680	4681	4682	4683	4684	4685	4686	4687	4688	4689	4690	4691	4692	4693	4694	4695	4696	4697	4698	4699	4700	4701	4702	4703	4704	4705	4706	4707	4708	4709	4710	4711	4712	4713	4714	4715	4716	4717	4718	4719	4720	4721	4722	4723	4724	4725	4726	4727	4728	4729	4730	4731	4732	4733	4734	4735	4736	4737	4738	4739	4740	4741	4742	4743	4744	4745	4746	4747	4748	4749	4750	4751	4752	4753	4754	4755	4756	4757	4758	4759	4760	4761	4762	4763	4764	4765	4766	4767	4768	4769	4770	4771	4772	4773	4774	4775	4776	4777	4778	4779	4780	4781	4782	4783	4784	4785	4786	4787	4788	4789	4790	4791	4792	4793	4794	4795	4796	4797	4798	4799	4800	4801	4802	4803	4804	4805	4806	4807	4808	4809	4810	4811	4812	4813	4814	4815	4816	4817	4818	4819	4820	4821	4822	4823	4824	4825	4826	4827	4828	4829	4830	4831	4832	4833	4834	4835	4836	4837	4838	4839	4840	4841	4842	4843	4844	4845	4846	4847	4848	4849	4850	4851	4852	4853	4854	4855	4856	4857	4858	4859	4860	4861	4862	4863	4864	4865	4866	4867	4868	4869	4870	4871	4872	4873	4874	4875	4876	4877	4878	4879	4880	4881	4882	4883	4884	4885	4886	4887	4888	4889	4890	4891	4892	4893	4894	4895	4896	4897	4898	4899	4900	4901	4902	4903	4904	4905	4906	4907	4908	4909	4910	4911	4912	4913	4914	4915	4916	4917	4918	4919	4920	4921	4922	4923	4924	4925	4926	4927	4928	4929	4930	4931	4932	4933	4934	4935	4936	4937	4938	4939	4940	4941	4942	4943	4944	4945	4946	4947	4948	4949	4950	4951	4952	4953	4954	4955	4956	4957	4958	4959	4960	4961	4962	4963	4964	4965	4966	4967	4968	4969	4970	4971	4972	4973	4974	4975	4976	4977	4978	4979	4980	4981	4982	4983	4984	4985	4986	4987	4988	4989	4990	4991	4992	4993	4994	4995	4996	4997	4998	4999	5000	5001	5002	5003	5004	5005	5006	5007	5008	5009	5010	5011	5012	5013	5014	5015	5016	5017	5018	5019	5020	5021	5022	5023	5024	5025	5026	5027	5028	5029	5030	5031	5032	5033	5034	5035	5036	5037	5038	5039	5040	5041	5042	5043	5044	5045	5046	5047	5048	5049	5050	5051	5052	5053	5054	5055	5056	5057	5058	5059	5060	5061	5062	5063	5064	5065	5066	5067	5068	5069	5070	5071	5072	5073	5074	5075	5076	5077	5078	5079	5080	5081	5082	5083	5084	5085	5086	5087	5088	5089	5090	5091	5092	5093	5094	5095	5096	5097	5098	5099	5100	5101	5102	5103	5104	5105	5106	5107	5108	5109	5110	5111	5112	5113	5114	5115	5116	5117	5118	5119	5120	5121	5122	5123	5124	5125	5126	5127	5128	5129	5130	5131	5132	5133	5134	5135	5136	5137	5138	5139	5140	5141	5142	5143	5144	5145	5146	5147	5148	5149	5150	5151	5152	5153	5154	5155	5156	5157	5158	5159	5160	5161	5162	5163	5164	5165	5166	5167	5168	5169	5170	5171	5172	5173	5174	5175	5176	5177	5178	5179	5180	5181	5182	5183	5184	5185	5186	5187	5188	5189	5190	5191	5192	5193	5194	5195	5196	5197	5198	5199	5200	5201	5202	5203	5204	5205	5206	5207	5208	5209	5210	5211	5212	5213	5214	5215	5216	5217	5218	5219	5220	5221	5222	5223	5224	5225	5226	5227	5228	5229	5230	5231	5232	5233	5234	5235	5236	5237	5238	5239	5240	5241	5242	5243	5244	5245	5246	5247	5248	5249	5250	5251	5252	5253	5254	5255	5256	5257	5258	5259	5260	5261	5262	5263	5264	5265	5266	5267	5268	5269	5270	5271	5272	5273	5274	5275	5276	5277	5278	5279	5280	5281	5282	5283	5284	5285	5286	5287	5288	5289	5290	5291	5292	5293	5294	5295	5296	5297	5298	5299	5300	5301	5302	5303	5304	5305	5306	5307	5308	5309	5310	5311	5312	5313	5314	5315	5316	5317	5318	5319	5320	5321	5322	5323	5324	5325	5326	5327	5328	5329	5330	5331	5332	5333	5334	5335	5336	5337	5338	5339	5340	5341	5342	5343	5344	5345	5346	5347	5348	5349	5350	5351	5352	5353	5354	5355	5356	5357	5358	5359	5360	5361	5362	5363	5364	5365	5366	5367	5368	5369	5370	5371	5372	5373	5374	5375	5376	537
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WRITTEN PERMISSION OF APICAL INDUSTRIES DART AEROSPACE IS PROHIBITED.



ORIGINAL DATE 09-27-08		DART AEROSPACE 3030 ENTERPRISE CT. SUE A	
DRAWN BY S. HUR		VISTA, CA, 92081	
CHECKED BY P. BRANG		(760) 724-5300	
DRAWING APPROVAL P. BRANG		APICAL INDUSTRIES INC. DART AEROSPACE	
CONTRACT NO.		AS350 CABLE CUTTERS KIT	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMALS ±.010 2 PLACE DECIMALS ±.005 ANGLES ±.5°		REV 8	REV C
SCALE NONE	SHEET 2 OF 5		

Technical drawing of a mechanical assembly. The drawing shows a cross-section of a component with a central rectangular block. A dimension line indicates a length of 65. A reference marker 'REF' points to the top surface of this block. Another reference marker 'REF' points to a circular feature on the right side of the assembly. The drawing includes various mechanical details such as bolts, washers, and a curved structural element.

A
B
C
D



ORIGINAL DATE (MO, DA, YR) 08-27-06	 3030 ENTERPRISE CT. SUITE A VISTA, CA 92081 (760) 724-5300
CHECKED BY J. SMITH	ISSUED BY P. BRAYNO
DRAWINGS APPROVAL P. BRAYNO	DATE 08-02-06
CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES 1" DIMENSIONS ±.01 2" DIMENSIONS ±.01 3" DIMENSIONS ±.01 ANGLES ± .5	
SIZE 17x26	CAGE CODE 646.4000
DATE 07/26/06	DWG. NO. 646.4000
SCALE NONE	REV C
SHEET 3 OF 5	TITLE AS350 CABLE CUTTERS KIT

1 2 3 4 5 6 7 8

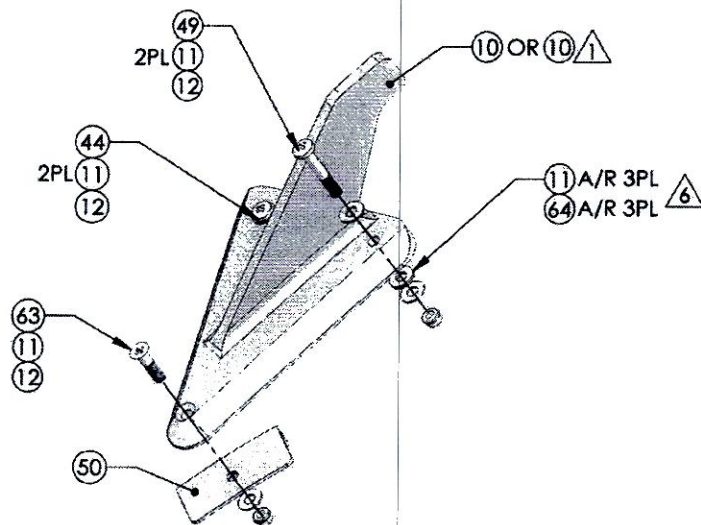
A

B

C

D

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DETAIL C
LH SHOWN EXPLODED
RH OPPOSITE

ORIGINAL DATE: 08/27/08		DNO: DA 12	
DRAWN BY: S. HUI	CHECKED: P. BRAVO	SUBJ: A	
DRAWING APPROVAL: P. BRAVO		CONTRACT NO.	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES 3 PLACES DECIMALS 0.005 0.005 0.005		NET: 07/12/16	DWG. NO: 646.4000
SCALE: NONE		REV: C	

DART 3030 ENTERPRISE CT.
AEROSPACE SUITE A
VISTA, CA 92081
APICAL INDUSTRIES, INC.
DBA DART AEROSPACE (760)-724-5300

AS350 CABLE CUTTERS KIT

SHEET 5 OF 5

REFERENCE ONLY

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WRITTEN PERMISSION OF APICAL INDUSTRIES D&A DART AEROSPACE IS PROHIBITED.

NOTES:

△ AFTER INSTALLATION, APPLY F/N 54 A/R TO FILL GAPS AND FILLET EDGES.

△ INSTALL F/N 14 WITH F/N 52 & 53.

A △ 3M VHB ADHESIVE TAPE .025" THICK X .50" WIDE
VENDOR: MCMASTER-CARR P/N 7593A651.

△ 3M TAPE PRIMER 94, APPLY TO BOTH SURFACES A/R BEFORE TAPE.
VENDOR: R.S. HUGHES P/N 021200-24216.

△ REUSE FASTENERS FROM F/N 1.

△ USE WASHERS A/R AS SHIMS TO OBTAIN BEST FITMENT.

△ AT CUSTOMERS OPTION, INSTALL F/N 65 BY MATCH DRILLING ON TO F/N 1.

△ INSTALL SHIM IF OEM PROVISIONS ARE INSTALLED ON AIRCRAFT. REMOVE
SHIM LAYERS TO ACHIEVE CORRECT SIZE. MATCH DRILL HOLES. USE F/N 78
SCREW IN PLACE OF F/N 17 SCREW.

B △ NEWER INSTALLATIONS ON AIRCRAFT WITH UPDATED CANOPY MAY
REQUIRE DIFFERENT LENGTH SCREWS. USE F/N 62 TO REPLACE F/N 44 &
F/N 26 IN PLACE OF F/N 41 WHEN NECESSARY.

UNINCORPORATED ECN(s)

05304

5	5	5	78	601.3875	SCREW	MS27039-1-19				
1	1	1	77	646.9410	SHIM	△				
	4	4	76	601.2764	WASHER	NAS11499B32P				
	2	2	75	601.2973	LOCKNUT	MS21042-08				
	2	2	74	601.2988	SCREW	MS27039-0813				
	2	2	73	601.2943	LOCKNUT	MS21042-3				
	2	2	72	601.3128	NUT	AN316C4E				
	2	2	71	601.3209	LOCKNUT	MS21042-1A				
	4	4	70	601.2638	WASHER	NAS11499B32P				
	2	2	69	601.2669	BOLT	AN4C7A				
	2	2	68	601.3119	CLEVIS	AN465-34E				
	2	2	67	601.3121	EYE BOLT	AN44A-5A				
	2	2	66	650.9201	EYE BRACKET ASSY					
	REF	REF	65	647.5701	GPS MOUNT KIT	△				
		2	64	601.3151	WASHER	NAS11499B32P				
		2	63	601.2911	SCREW	MS24694533				
	24	24	62	601.2637	SCREW	MS27039-1-16				
2	2	2	61	601.2763	BOLT	AN3-12A				
	1	1	60	646.3913	SHIM					
	4	4	59	646.3912	SHIM					
	1	1	58	646.3911	SHIM					
	4	4	57	646.3910	SHIM					
	5	5	56	600.1013	PRIMER					
	8 FT	8 FT	55	600.0129	VHB TAPE					
	1	1	54	600.1012	SEALANT	PR-1405 CLASS B				
	1	1	53	600.0991	MAGNIBOND 6998 PART B	△				
	1	1	52	600.0990	MAGNIBOND 6998 PART A	△				
6	10	10	51	601.2826	BOLT	AN3-11A				
		2	50	646.3814	WIPER BRACKET					
		2	49	601.2910	SCREW	MS27039-1-18				
	2	2	48	601.1365	SCREW	MS27039-1-10				
	2	2	47	646.3719	DOUBLER					
	2	2	46	646.3718	CUSTOM WASHER					
	1	1	45	646.3717	DOUBLER					
	22	22	44	601.1948	SCREW	MS27039-1-19				
	2	2	43	601.1952	SCREW	MS27039-1-20				
	4	4	42	601.1956	SCREW	MS27039-1-21				
AD04	AD05	AD04	AD03	AD02	AD01	FIND #	PART #	DESCRIPTION	MATL	SPEC.

REV.	DESCRIPTION	DATE	APPROVED
A	INCORPORATED ECN 0279, 0281, 0279 & 0275	02/08/2010	P. BRAYO
B	INCORPORATED ECN 0284, 0209 & 0473	11/04/2014	P. BRAYO
C	INCORPORATED ECN 0209	01/05/2015	P. BRAYO

		2	2	41	601.2829	SCREW	MS24694534			
		2	2	40	601.2831	RIVET	MS20425A05-7			
		1	1	39	646.3716	GAUGE BRACKET				
		6	6	38	601.1953	SCREW	MS27039-1-12			
	2		2	37	646.3715	STRUT DOUBLER				
		2	2	36	601.2824	BOLT	AN3-5A			
12	36		36	35	601.2277	RIVET	CC809A05-02			
	18		18	34	600.0795	NUT/PLATE	MS21042-3			
3	3		3	33	601.2545	RIVET	MS20476A05-7			
1	1		1	32	646.3813	STRUT BRACKET				
4	4		4	31	601.2822	BOLT	AN3-3A			
2	2		2	30	646.3812	GUSSET BRACKET				
8	8		8	29	601.2564	RIVET	MS20476A05-6			
1			1	28	646.3714	GUSSET				
	1	1	1	27	646.3610	FILLER				
	3	3	3	26	601.2830	SCREW	MS24694535			
	2	2	2	25	601.2825	BOLT	AN3-8A			
	1	1	1	24	646.3811	RADIUS BLOCK				
	1	1	1	23	646.3712	CLIP				
	1	1	1	22	646.3711	CLIP				
8	8		8	21	601.2832	RIVET	MS20476A05-5			
14	14		14	20	601.2020	RIVET	CC81013-5-3			
4	6	4	6	19	601.2823	BOLT	AN3-6A			
	1	1	1	18	601.2827	BOLT	AN3-10A			
	5	5	5	17	601.2912	SCREW	MS24694531			
1	1		1	16	646.3713	GUSSET				
1			1	15	646.3710	SUPPORT				
	1	1	1	14	646.3710	DOUBLER				
	1	1	1	13	646.3710	CHANNEL				
14	10	8	53	6	61	12	601.1624	LOCKNUT	MS21042-3	
16	32	18	120	16	144	11	601.1607	WASHER	NAS11499B32P	
				1	10	646.3410	LH WIPER DEFLECTOR			
				1	9	646.3411	RH WIPER DEFLECTOR			
		2		2	8	647.7703	STRUT ASSY			
		2		2	7	647.0112	STRUT BRACKET			
	1	1		1	6	646.3511	STRUT			
	1	1	1	1	5	646.3510	STRUT			
2		2		2	4	646.3810	BRACKET			
		1		1	3	646.2910	DEFLECTOR			
	1	1	1	1	2	646.3001	LOWER CUTTER ASSY			
		1	1	1	1	646.3301	UPPER CUTTER ASSY			
X						646.4006	LOWER CUTTER FIXED PROVISIONS			
	X					646.4005	LOWER CUTTER REMOVABLE PROVISIONS			
		X				646.4004	FIXED PROVISIONS KIT			
			X			646.4003	CABLE CUTTERS 48 WITH/OUT FIXED PROVISIONS			
				X		646.4002	AS350 WIPER DEFLECTOR KIT			
				X		646.4001	AS350 CABLE CUTTERS KIT			
AD04	AD05	AD04	AD03	AD02	AD01	FIND #	PART #	DESCRIPTION	MATL	SPEC.

QTY		PARTS LIST	
NEXT ASSY (S)		ORIGINAL DATE: 05-27-08	
		DRAWN BY: J. ROY	
		CHECKED BY: P. BRAYO	
		DRAWING APPROVAL: P. BRAYO	
		EXTRACT NO.:	
		UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES	
		TOLERANCES ARE:	
		3 PLACES DECIMALS: 0.000	
		2 PLACES DECIMALS: 0.00	
		1 PLACE DECIMAL: 0.0	
		ANGLES: 0.5°	
3030 ENTERPRISE CT., SUITE A		DART AEROSPACE	
VISTA, CA 92081		APICAL INDUSTRIES, INC.	
(760)-724-5300		D&A DART AEROSPACE	
AS350 CABLE CUTTERS KIT		REV. C	
DWG NO. 646.4000		REV. C	
SCALE: NONE		SHEET 1 OF 5	